

At 9:00 A. M. the nest was empty.

At some time about the middle of July some members of the Laboratory brought in two of the chicks from Gull Point. They should have been returned to that place, but, instead, were liberated on the Sandspit. However, on July 24, five of the six young sandpipers which were now on the Sandspit were banded by Dr. Stephens and Dr. Lynds Jones. As a matter of interest and record the numbers of the bands may be here given as follows: 11522, 11523, 11524, 11525, 11526. The young birds were observed on the spit as late as July 29. It is hoped to continue the study of these birds during the summer of 1914.

The facts obtained in this study may be summarized as follows:

#### SUMMARY.

The incubation period would seem to be over seventeen days.

The old birds dispose of the egg shells partly by devouring.

Hatching seems to occur during the night.

The chicks leave the nest within five or six hours, but probably not much sooner unless disturbed.

It seems that the young birds are not fed by the parents at any time, but forage for themselves from the beginning.

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## THE RESIDENT BIRD LIFE OF THE BIG CYPRESS SWAMP REGION.

By F. M. PHELPS.

In the spring of 1913 I had the good fortune to be in Florida during the months of March and April and the early part of May. Of this time the latter half of March and nearly all of April were spent in the Big Cypress Swamp region of Lee County in the southwestern part of the State, and it is relative to its resident bird life that this paper has to deal, giving particular attention to the larger and more important species.

For a week before entering upon this trip I visited at Clearwater with my good friend, Oscar E. Baynard, going over details and arrangements. I must thank him largely for such measure of good fortune as came to me later, for he gave me the benefit of the knowledge he had gained of the country during the two previous winters, and also secured for me the services of guides whom he had employed.

I arrived at Fort Myers March 13th, where I met Mr. Rhett Green, now employed as warden by the National Association of Audubon Societies, who was to conduct me to the rookery under his charge. We started out just before noon of the 14th in a light, single buggy and drove the rest of the day through the open, sun-lit pine woods without particular incident, and camped that night in a temperature that made even the lightest covering a burden and stirred the mosquitoes to the highest pitches of fervor.

By sun-up we were on the way again. The country was now growing wilder. The dog started a Wild Turkey from a clump of saw palmetto beside the trail, a Sandhill Crane swung trumpeting across a near-by pond. Twice we stopped while I slipped on my climbing irons and ran up to nests of the Florida Red-shouldered Hawk, each time to find two eggs apparently advanced in incubation. The ground was becoming low and wet and cypress "heads" more and more frequent. Toward noon we came out upon the edge of a big open marsh stretching away four or five miles to the south, far across which we could see a solid background of great cypress trees. This was my first view of the Big Cypress Swamp, which beginning here runs almost unbroken for sixty or seventy miles to the south and to the eastward until it finally merges with the Everglades.

As we progressed slowly across the marsh, often hub deep in water, singly and by flocks water birds began rising on every hand; Ward Herons, Egrets, White and Wood Ibis, Yellow-crowned Night Herons, Little Blue and Louisiana Herons, and several species of Ducks, including three of the rare Florida Duck (*Anas fulvigula fulvigula*). On an open pond we also identified the Limpkin and Purple Gallinule.

Early in the afternoon we arrived at Mr. Green's camp beside one of the finest rookeries to be found in Florida, an imposing one even in these days of diminishing bird life. Here is no doubt the largest nesting colony of Wood Ibis in the State, probably not less than 5,000 pairs of birds. Perhaps 300 American Egrets were nesting here, and a little handful, not more than a dozen pairs, of the beautiful



WHITE IBIS AT NEST  
Photo by O. E. Baynard

Roseate Spoonbill, which I saw here for the first time in life, a memory that still recurs to me. That evening as we stood watching the birds filing in from the feeding grounds and circling over the rookery, I caught a gleam of pink as one of the more distant birds turned in the rays of the setting sun, and leveling my glass I watched my first "Pink Curlew" circle slowly two or three times above the tree tops and then drop down to its nest.

Next morning as the first light of dawn tinged the eastern sky a pair of Sandhill Cranes began whooping on a little pond scarcely a quarter of a mile away, an old Turkey Gobbler struck up his mating call down the open glade that lay between us and the cypress swamp, the thousands of young Wood Ibis and other nestlings set up their insistent clamor for food, which did not hush nor diminish until the sun was high in the heavens, and then I realized that here



NEST AND EGGS OF WHITE IBIS

Photo by O. E. Baynard

was nature at first hand and that opportunities awaited me that do not come to every ornithologist.

I passed several very pleasant and profitable days with Green, and perhaps a few words in description of this splendid rookery, known as the Corkscrew among the plume hunters of South Florida, will not be amiss. In form it is a great ellipse of cypress swamp enclosing an open treeless area some three miles long and a mile or more in width, covered with saw grass and other swamp grasses. The encircling band of cypress varies in width from about one-

third of a mile at the narrow point on the east to two and three miles on the north and west, and to the south it stretches away solidly. Around this great circle birds may be found nesting at many points. Mr. Baynard, who visited this rookery in February, 1912, before the cypress trees had leaved out, gave it as his opinion that there were not less than seven or eight thousand nests of the Wood Ibis here. Tree after tree bore from twelve to twenty or more nests of this species, and in one I counted thirty-two. Years ago before the Egrets and Spoonbills had become so sadly decimated, for they once bred here in large numbers, it must have been a spectacle so imposing as to defy an adequate description. The Egrets, Wood Ibis, and Spoonbills all nest high up in the cypress trees, very few under fifty feet and many seventy-five and eighty feet up. At this season, the middle of March, nearly all the nests contained young. A few of the Wood Ibis and Egrets were still incubating eggs, but these were more than likely birds that had been broken up elsewhere.

Bird studying in a cypress swamp is not all roses, though. It means wading from start to finish, anywhere from knee to waist deep, with a good chance of hitting unexpected depths at any moment. The cypress trees, heavily draped with the Florida long moss, or as it is more commonly known, "Spanish moss," stand close together, vines cross and recross in the openings, impenetrable tangles of button-wood force you to turn aside. Occasionally one comes upon deep, open pools and lagoons covered with lettuce and lily pads, with here and there a half-grown alligator perking up his head. There were big ones in the swamp, too, although I never chanced to see one, but the bellows that emanated forth on a couple of hot nights never came from anything less than eleven or twelve foot 'gators.

Another interesting feature, and one that is not likely to slip your mind for any great length of time, is the dangerous cotton-mouthed moccasin, for he puts in his appearance just about often enough and at just about familiar enough range to keep one on the qui vive. Wading waist deep you come to a nice log and start to climb up onto it. You look again,

a moccasin is within reach of your hand. If he is a small one, he will probably slip off the other side, but if he happens to be four and a half or five feet long and eight or ten inches in girth, he just coils up, opens his white mouth, gently quivers his tail and waits. You will have to kill him or go the other way.

I visited this rookery a second time the middle of April, making the trip across country from Immokalee. Large numbers of the young birds had now left the nests and many were accompanying the old ones to the feeding grounds. In the morning the young Wood Ibis congregated by the hundreds in the cypress saplings at the edge of the swamp just opposite the camp to enjoy the warmth of the early sun. We found one group of Egrets, about fifty pairs, with fresh nests and just beginning the duties of incubation. These were undoubtedly new arrivals, remnants of a shot-out rookery not far away.

To illustrate some of the uncertainties of a cypress swamp. We were three hours reaching this colony of Egrets, located less than a mile within the swamp, although we had visited the same place a month before and presumably knew exactly where it was. The trouble arose from starting in at a slightly different point and encountering a deep lettuce covered lake, in detouring around which we got off our course. By climbing a tree we got a line on the flight of the birds and eventually the croaking of the nestlings drew us to the right spot. In going out we picked up our old trail and were at the edge of the swamp in half an hour.

This rookery has been under the protection of the Audubon Society since 1912. In that year, through the energetic efforts of Mr. Baynard, B. Rhett Green of Fort Myers was hired as warden and assumed the duties of guarding it about the middle of the breeding season. Its future now seems assured, and it is perhaps not too much to anticipate that it will eventually regain something of the prosperity of its former days.

I shall not go into the details or attempt to recount all the various happenings of my trip, for this might finally

become burdensome. During the latter part of March I made an excursion southward from the Corkscrew rookery, following down along the edge of the Big Cypress Swamp to a point some sixty miles below Fort Myers. The first two weeks of April, in company with a guide from Immokalee, I crossed the Ocaloacoochee Slough and penetrated southeasterly to the Seminole Indian reservation at the edge of the Everglades. Then returning to Immokalee, I made a second trip to the Corkscrew rookery from that point.

A few words in regard to the general character of the country. The interior of Lee County is pretty much a wilderness. The Big Cypress Swamp, beginning some thirty miles south of Fort Myers, covers most of the central part of the county. To the north and east of the swamp it is principally open pine woods, interspersed here and there with hammocks of oak and palmetto and small cypress swamps, or "cypress heads," as they are usually called. There are several considerable prairie tracts, particularly in the vicinity of Immokalee. In the eastern part of the county there is another large swamp area known as the Ocaloacoochee Slough. In general the country is low and wet with many small lakes and ponds, and after heavy rains water stands everywhere.

Game is fairly abundant. I saw five deer at one time enjoying a noonday siesta in a small grove of pine trees, and in all I probably saw thirty during my trip. Wild Turkey are plentiful and in the wilder country about the cypress swamps wild-cat, bear and panther are to be found.

Immokalee, with a population of fourteen families, located about thirty-two miles southeast of Fort Myers, is the principal settlement, although there are a couple of other smaller ones. Excepting these the only inhabitants are the Seminole Indians and a few cattlemen, who take advantage of the excellent pasture afforded in some places to graze their lean, half-wild cattle. Maps show several forts such as Shackelford and Simon Drum, but these are relics of the old Indian wars, long since fallen into ruin, and their sites can only be determined with difficulty.

The Seminoles, who number about four hundred, live on a

reservation down at the edge of the Everglades about eighty miles southeast of Fort Myers. They are under the control of a government agent, but do little or no work, depending largely on otter and alligator hunting to pick up a few dollars. For several years back the alligator market has been very flat, and they find plume hunting the more lucrative. We camped with an Indian one evening a few miles south of the Ocaloacoochee Slough, who informed me he had shot eight plumes that season, which he had sold at Miami for \$8.00 apiece, bringing him in rather a tidy sum. Incidentally I had the pleasure of dining on palmetto cabbage as prepared a la Seminole, and an excellent dish I found it.

The subject would not be complete without a word or two about insect pests. The mosquitoes are without number. As soon as darkness falls they simply arise in swarms. Sleeping without a bar, and a cheesecloth one at that, is out of the question. Even the Seminoles use them. The steady hum of mosquitoes hovering just outside your bar becomes merely a part of life. The horse flies of this region are the last word. In April it is necessary to wrap a horse in burlap when used, and even then they get to them pretty hard. Around camp a horse will stand right up in a smudge all day, and trust to feeding at night. The cattle are forced to bunch together and retire into the cypress swamps during the middle of the day. Even man is not entirely exempt. A couple of times when dining somewhat en dishabille after a wade in the swamp we were forced to hustle out our shoes, etc., for protection.

In the following list of resident species I have aimed to name only those that I actually found breeding or observed under circumstances which made it seem fairly certain they were doing so. The winter of 1912 and 1913 was unusually warm and the spring early, which had its effect on the nesting of many of the species, causing them to begin in some cases several weeks earlier than in ordinary seasons.

1. *Anhinga anhinga*. Water Turkey. Some four or five hundred were breeding at the Corkscrew rookery. On my first trip into the swamp, March 16th, most of the nests contained eggs, but some of the



young had hatched at that date. Many of the nests were 50 and 60 feet up in the cypress trees, but others were found in low bushes beside lagoons.

2. *Anas fulvigula fulvigula*. Florida Duck. Observed feeding on the marshes, but no direct evidence of nesting obtained.

3. *Aix sponsa*. Wood Duck. A common resident in and about the cypress swamps. One nest found April 18th in a Pileated Woodpecker's hole about 30 feet up in a large pine. It contained nine eggs neatly covered with down. Birds not observed about nest.

4. *Ajaja ajaja*. Roseate Spoonbill. This species is right on the danger mark. I doubt if there are more than 50 or 60 birds in the several rookeries in the interior of Lee County. There were not over ten or twelve pairs at Corkscrew, about a similar number at the principal rookery of the Ocaloacooche Slough, and a few are to be found at the other important rookeries. Nesting usually begins in February.

5. *Guara alba*. White Ibis. Observed feeding in considerable numbers on the Corkscrew marsh during March. They nest during April and May, and at Corkscrew they use the elders and button-wood that fringe the inner circle of the swamp.

6. *Mycteria americana*. Wood Ibis. This species forms the bulk of the population at each of the principal rookeries of the Big Cypress region, and its abundance can be readily inferred from my remarks as to the number nesting at the Corkscrew rookery. Nesting usually begins in January and by March 1st the young are as a rule all hatched. The number of eggs is usually three, occasionally four. This bird is a splendid flier and it is a fine sight to watch them filing in from the feeding grounds, floating high in the air on motionless pinions like great kites, for in their power of flight they are comparable to the raptores rather than to the heron tribe.

7. *Ardea herodias wardi*. Ward's Heron. Fifty or sixty pairs were nesting in the Corkscrew rookery, as a rule in company with the Egrets. Their huge nests are fully twice as large as those of the latter. They are early breeders, usually beginning family duties in January. Also observed nesting in company with Little Blue and Louisiana Herons in willow bushes in ponds.

8. *Herodias egretta*. Egret. The Long White has succeeded in maintaining itself in the face of constant and relentless persecution, for here it has the Seminole Indian as well as the white plume hunter as an enemy. Annually in February the birds gather at the old accustomed rookeries, build their nests and perhaps lay their eggs, and then the plume hunter appears. Each is so anxious to beat the other to it that they scarcely give the birds a chance to get a few sticks piled together, as my guide put it. A few birds are killed, not many, as the birds are wary until the eggs are advanced in incubation or the young hatched. Then they desert the rookery and try it somewhere else, with more than likely the same result. A cattleman told me of coming onto a small

colony nesting in a little cypress swamp late in June, 1912, every plume shed, but incubating eggs. There is still a sufficient nucleus of these birds left in the Big Cypress region, so that the species will build up rapidly if given proper protection.

9. *Egretta candidissima candidissima*. Snowy Egret. Now but a memory in this region. I have asked hunters and the settlers at Immokalee about this bird and the answer is always the same: "About eight or ten years ago I saw one at such and such a place." This Egret is still to be found, however, in the coast rookeries of Lee County and on the Caloosahatchie River near the Everglades.

10. *Hydranassa tricolor ruficollis*. Louisiana Heron. Abundant. Observed nesting in company with Little Blue Herons in clumps of willows in ponds during early April.

11. *Florida caerulea*. Little Blue Heron. Always associated with the Louisiana Heron and remarks about one are equally applicable to the other. Large numbers of immature birds in the white plumage were observed on the feeding grounds.

12. *Butorides virescens virescens*. Green Heron. Not very common. Observed only now and then and not found nesting.

13. *Nycticorax nycticorax naevius*. Black-crowned Night Heron. Observed several times, and it is no doubt a breeding species, although I did not find it nesting.

14. *Nyctanassa violacea*. Yellow-crowned Night Heron. Quite a number nested at the Corkscrew rookery and we used often to come upon them feeding beside quiet pools and lagoons.

15. *Grus mexicana*. Sandhill Crane. Still to be rated as a common bird in Lee County. I hardly believe there was a day of my trip that I failed to see or hear it. They were usually in pairs, though a number of times I saw four or five together. The nesting of this bird is very uncertain. It may begin in late February or it may be deferred to April or May. Mr. Green told me of finding a nest early in June, 1912, with fresh eggs. I am inclined to think the amount of water in the nesting ponds is an important factor. The bird seems to require that its nesting site be surrounded by water. Twice after heavy rains I found them scratching up nests in grassy ponds which they abandoned without using when the ponds began to dry up. Three occupied nests were found, on April 4th and 8th, with eggs far advanced in incubation, and on April 12th with fresh eggs. In this latter case the birds had scratched up no less than four nests in a small flag pond I could throw a stone across. Why the extra nests, two of which were only about half complete, is a question.

16. *Aramus vociferus*. Limpkin. Observed twice in the cypress swamp at Corkscrew, and also feeding on a small lake on the marsh. Presumably there was a small nesting colony in the vicinity.

17. *Ionornis martinicus*. Purple Gallinule. Observed several times on small lakes feeding among the bonnets.

18. *Gallinula galeata*. Florida Gallinule. Identified twice on a small lake on the Corkscrew marsh.

19. *Colinus virginianus floridanus*. Florida Bob-white. Abundant about Immokalee and through the higher and more open pine woods. Nesting in late March and early April. I was told of a nest with 13 eggs being found at Immokalee the last week of March.

20. *Meleagris gallopavo osceola*. Florida Turkey. A common resident throughout the interior of Lee County and should remain so for years to come. I saw many, thanks largely to the dogs that were nearly always along. Late on the afternoon of April 18th as we were working along an open glade bordering a cypress swamp the dog began to nose excitedly in the grass. Suddenly up popped half a dozen little brown cannon-balls, quail I thought, but when they alighted in some cypress saplings I saw at once they were young Turkeys. The old hen, hard pressed, soon rose from the grass and sailed away across the tops of the cypress trees. More youngsters kept popping up until there were eleven sitting about in the saplings some twelve or fifteen feet up. Soon one gave a peculiar little "quit," and then to my utter astonishment flew straight away over the tops of the cypress trees after the old hen, and one by one the rest followed. My guide pronounced them to be about two weeks old and that seemed to me about correct. A few days later the dog ran onto another old hen with young but a few hours old, and we had some trouble in keeping them from coming to harm. The early spring of 1913 caused some of the Turkeys to begin nesting the forepart of March. In ordinary years deposition of eggs does not begin much before April 1st.

21. *Zenaidura macroura carolinensis*. Mourning Dove. Observed occasionally in the pine woods. Not common.

22. *Chaemepelia passerina terrestris*. Ground Dove. Common about Immokalee, and seen occasionally in the pine woods. One nest found April 4th with two fresh eggs.

23. *Cathartes aura septentrionalis*. Turkey Vulture. Present in considerable numbers during the breeding season, but no evidence of nesting found, and it may be that it does not so far south in Florida.

24. *Catharista urubu*. Black Vulture. Abundant. I found no nests, but saw them mating several times. They are a nuisance hanging around a camp, as it is necessary to keep things pretty well covered to be safe.

25. *Elanoides forficatus*. Swallow-tailed Kite. I spent much time looking for the breeding haunts of this species, which is still to be found in certain of the wilder parts of Florida, and was rewarded by finding it nesting at two widely separated points, one far down on the edge of the Big Cypress Swamp, the other near the Ocaloacoochee Slough. It is a bird to be associated with cypress swamps. It loves the broad, open glades that fringe them, and here of a late afternoon you may chance to see them feeding. Gracefully and tirelessly they circle back and forth, chattering as they pass close to one another, and perhaps if the

mood is on them they will take a turn at somersaulting and other startling aerial stunts. They show very little fear of man at such times, for more than once as I have stood watching them they would swing unconcernedly within 30 or 40 feet of me. The birds are to a certain extent gregarious, for where you find one pair there will likely be two or three more nesting within a radius of half a mile or so. The Kite population of the vicinity can easily be arrived at when you start to climb a nest. The cries of its owners quickly attract the other Kites within hearing distance, and they join in the outcry, though at a safer distance. At each of the nests I climbed from five to eight Kites were circling above me by the time I had gotten well started.

It is an exhilarating experience to sit in the top of one of those tall southern pines, with the breeze swaying you gently back and forth, and watch these matchless fliers sweep and careen above you. Only once did I encounter a really vicious bird. Time and again she swooped down on me, once just brushing my shoulder with her wing. It took all my attention to do the climbing and I never knew just when I was to feel the rush of her wings and hear the sudden boom of their arrested motion right at my ear. It was just a little nerve trying.

Two different times I had the good fortune to watch the birds nest building, and both times the ceremony was much the same. The female, escorted by the male, carried the nesting material. With the most graceful of evolutions, accompanied by a constant chatter, very pleasing to hear, and which reminded me much of the love-making of a pair of Barn Swallows, they flew to a point above the nest. The female dropped down for a moment, arranged the stick or bit of moss in the nest, then rejoining the male away they went chattering as far as one could follow them.

The nests I examined were made of dead cypress twigs and Spanish moss, and were lined abundantly with a soft, silky, green moss plucked from dead cypress trees. In all I found six nests. Two were in the process of construction, the other four contained two eggs each. Five were in pine trees, the sixth in a tall slim cypress. One was at the comparatively low elevation of 55 feet, the highest about 85 feet up and well out on a branch running off at an angle of 45 degrees, the most difficult climb of them all. This last mentioned nest I collected together with the eggs, first crawling out and securing the eggs, then roping up the limb and cutting it off with a hand axe. Nesting dates were March 17th, an unusually early date, perhaps a record, March 28th, April 7th and April 21st. In the latter case the eggs were half incubated. The dates when observed building were April 6th and 7th.

26. *Circus hudsonius*. Marsh Hawk. Observed several times quartering over marshes and ponds during April, and I am inclined to think it nests here.

27. *Buteo borealis borealis*. Red-tailed Hawk. This species is rare in Lee County. One nest found April 5th about 20 miles south of the

Ocalacoochee Slough. It was about 75 feet up in a big pine. Unfortunately a cattleman, who chanced to take dinner with us near the spot, had shot the female about three weeks previous. Her body lying under the tree was sufficiently preserved to make certain of the identity.

28. *Buteo lineatus alleni*. Florida Red-shouldered Hawk. By far the most abundant of the hawks. Fully 20 nests were seen and no especial effort made to find them. Seven which I examined had either two eggs or two young, not a single one three. The birds nest either in pine or cypress, and where available use large quantities of Spanish moss. Nesting dates: March 15th incubated eggs, April 7th eggs far advanced in incubation, April 3rd half-grown young.

29. *Buteo brachyurus*. Short-tailed Hawk. Rare. Found breeding by Baynard in February, 1912.

30. *Haliaeetus leucocephalus leucocephalus*. Bald Eagle. There was one large nest in a pine standing at the edge of the Corkscrew marsh. As breeding begins in November, the young had already left.

31. *Falco sparverius paulus*. Florida Sparrow Hawk. Moderately common resident of the pine woods and hammocks.

32. *Polyborus cheriway*. Audubon's Caracara. Nowhere common. It prefers the more open country and the palmetto hammocks, this tree being its favorite nesting site. I found a nest on April 5th about 50 feet up in a pine, containing two half-grown young. Green reported seeing two young just out of the nest at the edge of a palmetto hammock April 15th.

33. *Pandion haliaëtus carolinensis*. Osprey. There were two occupied nests in the Corkscrew cypress swamp. One was a huge affair planted squarely on the top of a limbless cypress stub, 60 feet up. At both nests the birds were incubating eggs the third week in March and were very noisy as long as we remained in the vicinity.

34. *Strix varia alleni*. Florida Barred Owl. Abundant. Their nightly serenades were one of the most interesting features of camp life. On March 16th, while exploring a little cypress head, I found a young one about 15 feet up in a sapling. He could get about the limbs and work from tree to tree too lively for me and I tried in vain to catch him. During the proceedings the mother came up close, ruffling her plumage and clicking her bill savagely. On the above basis it would seem that nesting begins early in January.

35. *Otus asio floridanus*. Florida Screech Owl. Apparently not very common. Heard two or three times about hammocks.

36. *Bubo virginianus virginianus*. Great Horned Owl. A rare resident. Heard once down on the edge of the Big Cypress Swamp.

37. *Speotyto cunicularia floridana*. Florida Burrowing Owl. This interesting little Owl is nearing extinction. On the prairie near Immokalee I could find only four or five pair nesting where formerly it was abundant. The hand of the cattleman is against it. A couple of bur-

rows excavated April 4th showed the birds just getting ready to nest. One contained one egg.

38. *Campephilus principalis*. Ivory-billed Woodpecker. In Florida this splendid Woodpecker is now confined to the wildest and remotest swamps. Far down in the Big Cypress I had the good fortune to see and hear it, the reward of hours of laborious wading. It is readily distinguishable from the Pileated Woodpecker in flight by the large amount of white on the wings. Its call is quite different, too. There is a distinct pause between the notes and it lacks the carrying power of that of the Pileated. Two nesting sites of former years were seen, both in cypress trees. They may be identified with certainty, as the hole is somewhat oblong in shape, the height being to the width in about the ratio of three to two. The birds also have the peculiar habit of stripping the outer bark from the trunk for a considerable distance below the nest.

39. *Dryobates borealis*. Red-cockaded Woodpecker. Locally distributed in the higher pine woods. Several nesting sites noted. These are cut into living pines with dead hearts, and the trunk for several feet below the nest is thickly smeared with pitch.

40. *Phloeotomus pileatus*. Pileated Woodpecker. Common and observed almost daily. Three nests were found, all in dead pines, one with three slightly incubated eggs April 5th, a second on the following day with three half-grown young, and the third April 18th, in which the birds were feeding young. One fact that I noted several times is that this bird feeds on the ground after the manner of the Flicker.

41. *Melanerpes erythrocephalus*. Red-headed Woodpecker. Common, but less so than the two following species. Beginning nesting in April.

42. *Centurus carolinus*. Red-bellied Woodpecker. Common and nesting in March. I found one pair appropriating a former nesting cavity of the Red-cockaded Woodpecker.

43. *Colaptes auratus auratus*. Flicker. Common throughout the pine woods. Nests with fresh eggs April 19th and 23rd.

44. *Antrostomus carolinensis*. Chuck-will's-widow. Common in the hammocks, but rare elsewhere. Nesting in April.

45. *Chordeiles virginianus chapmani*. Florida Nighthawk. Observed during early April near Immokalee and it probably nests there.

46. *Tyrannus tyrannus*. Kingbird. A common resident of the pine woods. Saw my first Kingbird March 21st and in a day or two they were plentiful. Observed a pair building April 19th.

47. *Myiarchus crinitus*. Crested Flycatcher. Abundant. The small cypress heads are their favorite haunts and nearly every one harbors a pair or two. They were common everywhere when I first entered the woods March 14th. Nesting begins in April. On the 7th I observed a bird carrying material into a hole in a small cypress tree, and on the 17th I picked up part of an eggshell from the ground.

48. *Cyanocitta cristata florincola*. Florida Blue Jay. A few were observed about hammocks, but not commonly. No nests found.

49. *Corvus brachyrhynchos pascuus*. Florida Crow. Abundant and many nests seen. Eggs far advanced in incubation March 17th.

50. *Corvus ossifragus*. Fish Crow. Found only in the vicinity of rookeries, particularly at Corkscrew, where they do a great deal of damage. Collected a set of five slightly incubated eggs March 28th, the nest being in the bud of a slim pine.

51. *Agelaius phoeniceus floridanus*. Florida Red-wing. Common on the marshes and larger ponds. Nesting in April.

52. *Sturnella magna argutula*. Southern Meadowlark. Abundant in the open pine woods and prairies. Nesting dates: March 25th four fresh eggs, April 4th three incubated eggs.

53. *Quiscalus quiscula aglaeus*. Florida Grackle. We found quite a colony nesting in cavities in the cypress trees at Corkscrew March 20th, and the latter part of April I found another group making use of similar sites in a small cypress head.

54. *Megaquiscalus major major*. Boat-tailed Grackle. Observed nesting in several ponds in early April. Common where it can find suitable haunts.

55. *Ammodramus savannarum floridanus*. Florida Grasshopper Sparrow. Rather common on the prairies. I scratched up a lot of grass looking for their nests when flushed at close range, but was no doubt too early for them.

56. *Pipilo erythrophthalmus alleni*. White-eyed Towhee. Very local and not common. About Immokalee quite a few were seen.

57. *Cardinalis cardinalis floridanus*. Florida Cardinal. Common near Fort Myers and about Immokalee, but almost entirely wanting in the wilder sections.

58. *Progne subis subis*. Purple Martin. In early April half a dozen pair were nesting in woodpecker holes in a couple of dead pines near Immokalee.

59. *Lanius ludovicianus ludovicianus*. Loggerhead Shrike. Observed only in the orange groves at Immokalee.

60. *Vireo griseus maynardi*. Key West Vireo. Not common. Seen only a very few times. One nest found April 10th containing four fresh eggs.

61. *Geothlypis trichas ignota*. Florida Yellow-throat. Noted frequently about the saw palmetto growth in the vicinity of Immokalee. Apparently nesting about the middle of April.

62. *Mimus polyglottos polyglottos*. Mockingbird. Like the Cardinal the Mocker prefers the haunts of man. They were common at Immokalee, but I don't think I ever saw one in the wilder country.

63. *Thryothorus ludovicianus miamensis*. Florida Wren. A common resident. I saw a nest in an old tin coffee can hanging on the side of a shed at Immokalee April 4th. At Green's camp a pair built in the

pocket of an old sweater. I also saw a nest in a natural cavity of a gnarled pine tree at the edge of cypress swamp 20 miles from any human habitation.

64. *Sitta pusilla*. Brown-headed Nuthatch. Moderately common resident of the pine woods. Saw a pair building March 16th, and another pair feeding young April 18th.

65. *Sialia sialis sialis*. Bluebird. Quite common in the pine woods. Observed them about nesting holes several times in April, but examined none.